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12	UNITED STATES DISTRICT COURT			
13	CENTRAL DISTRICT OF CALIFORNIA			
14	SOUTHERN DIVISION			
15	POLARIS POWERLED	Case No. 8:18-cv-01571-JVS-DFM		
16	TECHNOLOGIES, LLC Plaintiff,	VIZIO, INC.'S REPLY CLAIM CONSTRUCTION BRIEF		
17	V.	Date: October 24, 2019		
18	VIZIO INC	Time: 3:00 PM		
19	Defendant.	Place: Courtroom 10C		
20	Defendant.			
21		Judge: Honorable James V. Selna		
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Case No. 8:18-cv-01571-JVS-DFM

VIZIO, INC.'S REPLY CLAIM CONSTRUCTION BRIEF

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I. INTRODUCTION

Defendant VIZIO, Inc. ("VIZIO") hereby submits its reply claim construction brief for the nine terms at issue from U.S. Patent No. 8,223,117 (the "'117 patent"). The parties did not propose briefing any terms from U.S. Patent No. 7,239,087 as part of this process, though they did identify terms for construction.

II. BACKGROUND & SUMMARY OF THE ISSUES

A. Polaris's "Overview of the '117 Patent" Is Misleading

As an initial matter, Polaris provides an "Overview of the '117 Patent" that is incorrect in ways that are particularly relevant to disputes between the parties and demonstrate the significant issues with Polaris's positions.

For instance, while Polaris's Overview discusses aspects of three embodiments that purportedly refer to "dark level bias" as a "value," it is notable that Polaris *never* mentions the aspects of those same embodiments, as well as other portions of the specification and prosecution history, that refer to "dark level bias" as a component. Polaris's citation of portions of the specification referring to "dark level bias" as a "value" is thus beside the point. VIZIO's indefiniteness argument is based in part on this conflict in the specification, which sometimes refers to "dark level bias" as a value and other times refers to it as a component.

Polaris's Overview simply ignores the substantial conflicting intrinsic evidence characterizing the "dark level bias" as a component of the claimed circuit, not a "value." As just one example, the specification describes the "dark level bias *circuit* [as] maintain[ing] the brightness control signal above a predetermined level...." Ex. 1 at 2:54-61 (emphasis added). Similarly, the applicant referred to a dark level bias "circuit" during prosecution when referring to the claim limitation in question and distinguishing the prior art: "Thus, in an embodiment, the dark level bias circuit ensures a predefined (or minimum) brightness in total ambient darkness, which is not a boost factor" as taught in the prior art. Ex. 2 at POLARIS_0000435 (emphasis added).

That Polaris summarized the patent at length but remained utterly silent as to this conflicting evidence is a glaring omission. Polaris has no way to resolve the conflicting evidence that a person of ordinary skill in the art would face, but instead cherry-picks evidence in support of its construction.

Not stopping there, Polaris also ignores the lack of any evidence supporting its explanation of what constitutes "approximately zero" ambient light. For instance, Polaris states throughout its Overview that an ambient light level which is "approximately zero" occurs "in complete darkness" or "total ambient darkness"—an absolute value. Polaris's Opening Brief ("Br.") at 3. But that is not what is recited in claims 1 and 15: the applicant sought to change the scope of the invention by using the term "approximately." Elsewhere Polaris characterizes "approximately zero" as "when the ambient light level is *very low*" or when there is "an absence of any *appreciable* ambient light." *Id.* at 12; Dkt. 106-1 (Balakrishnan Decl.) at ¶ 43 (emphasis added). But Polaris's Overview (and the rest of its brief) cites no *actual* intrinsic evidence providing guidance to determine when the ambient light level is "very low" or not "appreciable," such that the brightness of a display must be maintained.

Polaris refers in the Overview to the specification's reference to "total ambient darkness," but this does not resolve the scope of the actual claim language. The applicant expressly chose "approximately zero" when amending to overcome the prior art, not "total ambient darkness." *See* Ex. 2 at POLARIS_0000429 (Jan. 23, 2012 Response to Office Action). Thus, when the applicant chose to describe the ambient light level at which the display's brightness is maintained, he specifically chose to claim something different than "zero" or "total ambient darkness." But the specification provides no guidance as to how far beyond zero an ambient light level of "approximately zero" is. The term is indefinite, and evidence relating to an absolute value only underscores the lack of any reasonable certainty as to the remaining claim scope.

B. Polaris's Expert is Not a Person of Ordinary Skill in the Art and Lacks Any Relevant Experience with the Technology

Another problem with Polaris's brief is its reliance on the declaration of Dr. Balakrishnan. VIZIO submits that the Court can and should disregard Dr. Balakrishnan's declaration because he does not meet the definition of a person of ordinary skill in the art. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1318-19 (Fed. Cir. 2005); *Inpro II Licensing, S.A.R.L. v. T-Mobile USA, Inc.*, 450 F.3d 1350, 1357 (Fed. Cir. 2006). Dr. Balakrishnan lacks any experience with the actual aspects of the technology at issue here and does not meet the only definition of a person of ordinary skill proposed to the Court—the one proposed by VIZIO. VIZIO submits that Dr. Balakrishnan's testimony, which is largely conclusory to begin with, should be given no weight at all for this reason. *See Sinorgchem Co. Shandong v. Int'l Trade Com'n*, 511 F.3d 1132, 1137 n.3 (Fed. Cir. 2007).

Specifically, "[t]he inquiry into how a person of ordinary skill in the art understands a claim term provides an objective baseline from which to begin claim interpretation." *Phillips*, 415 F.3d at 1313. Despite knowing "[t]he importance of identifying the education and experience of one of skill in the art" for claim construction purposes, Polaris failed to propose a definition here, thereby waiving any argument on it. *See Seoul Semiconductor Co. Ltd. v. Nichia Corp.*, 596 F.Supp.2d 1005, 1011 (E.D. Tex. 2009) (citing *Nazomi Communications, Inc. v. Arm Holdings, PLC*, 403 F3d 1364, 1370-71 (Fed. Cir. 2005)). Accordingly, VIZIO respectfully submits that the Court should adopt VIZIO's standard, the only one properly before the Court.

VIZIO's proposed definition is as follows:

¹ Polaris should not be allowed to propose a standard in its Reply Brief and deny VIZIO the opportunity to respond on this threshold issue that Polaris should have raised in its Opening Brief.

A person of ordinary skill in the art at the time of filing (2004) would have at least a bachelor's degree in electrical engineering, physics, optics or a related field, and at least three (3) years of further practical or educational experience working with analog circuit design, lighting design, and/or optical sensors.

Dr. Balakrishnan does not qualify as a person skilled in the pertinent art at issue here. He does not have a degree in electrical engineering, physics, optics or a related field. *See* Dkts. 106-1 & 106-2. Based on the information disclosed by Polaris, it appears that Dr. Balakrishnan also has no experience in "analog circuit design, lighting design, and/or optical sensors," despite this being the core subject matter addressed by '117 patent. *Id.* His degrees were in computer science, and his only disclosed work experience is in teaching computer science—areas having nothing to do with either party's summary of the technology.

VIZIO is the only party that has presented the Court with a standard for the person of ordinary skill and testimony from an expert—Dr. Thomas Katona—who meets that definition and has relevant experience. Polaris's declaration from Dr. Balakrishnan should be ignored.

C. Polaris's Assertion that VIZIO Did Not Disclose Its Indefiniteness Theories Prior To Briefing Is Baseless

Polaris claims that "as of the filing of this brief, VIZIO has not disclosed to Polaris its theory of indefiniteness, which is improper." Br. at 1-2. This is flatly untrue. The parties engaged in multiple meet and confers while compiling the Joint Claim Construction Statement. At the first meet-and-confer, Polaris did not come prepared to identify agreed-upon terms or what terms Polaris intended to propose as its top five terms for construction. Ex. 6 (8/7/2019 email). VIZIO thus told Polaris that a substantive discussion of the parties' positions made little sense at that time. *Id.* Following up on this meet and confer, VIZIO *specifically* proposed that "once the parties have agreed on up to 10 terms to propose for construction, they can have a more focused discussion regarding the parties' dispute over those terms, *including the substance of the parties' positions*." Ex. 6 (8/7/2019 email). VIZIO also

confirmed again that "after the parties have identified the information required for the Joint Claim Construction Statement, we can meet to discuss the substance of the parties' positions." Id.

VIZIO thus proposed and held a second meet and confer, during which VIZIO did, in fact, explain its substantive indefiniteness positions. Reply Summers Declaration at ¶ 4. This included the positions VIZIO set out in its Opening Brief that the dark level bias term is characterized in an irresolvably ambiguous manner in the claims, that Polaris's position that it is a "value" renders the term indefinite, and that "approximately zero" renders the full scope of that claim term indefinite. *Id.* Thereafter, Polaris did not assert or complain that VIZIO had not adequately disclosed its positions—it could not.

III. ARGUMENT

A. Claims 1, 14, 15: The Proper Reference for "Ambient Light" Is The "Visible Display"

VIZIO's Construction	Polaris's Construction	
"light surrounding a visible display"	Plain and ordinary meaning	

VIZIO's construction of "ambient light" is consistent with the meaning of that term as known to a person of ordinary skill in the art. Ex. 5 (Katona Decl.) at ¶ 26-31. Based on Polaris's opening brief, there appears to be only one disputed issue: whether the proper reference point for "ambient light" relevant to the claims is the "visual display" or the "light sensor."

For context, as set out in its Opening Brief (at 3-5), VIZIO's construction has two aspects, both of which are consistent with the claims and specification. *First*, "ambient light," as described in the claims and specification, is light surrounding the "visual display" recited in the claims—not other ambient light, such as ambient light simply present in the room not affecting the visual display. Ex. 1 at 1:27-30; *id.* at 1:30-36. *Second*, "ambient light" includes light produced by the display itself. *Id.* at 1:24-25; Ex. 5 (Katona Decl. at ¶ 30).

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Polaris appears to take issue with only the first aspect of this construction, arguing that "ambient light," as described in the claims and specification, is light surrounding the "light sensor," not the "visible display." In support, Polaris claims that VIZIO's construction is "contrary to the claim language" and cites claim 1 (Br. at 8), which states there is a "light sensor configured to sense ambient light." Polaris's argument is incorrect for two reasons.

First, Polaris's argument is undone by independent claim 15, which also recites the disputed "ambient light" claim term. Claim 15 does not recite a light sensor at all, but does recite that the claimed method is for "provid[ing] ambient light correction . . . for controlling the brightness of a visible display." Id. at cl. 15 (emphasis added). It hardly makes sense to find that the plain and ordinary meaning of "ambient light" is "light around the light sensor," as Polaris contends, when no light sensor is referenced at all in a claim reciting the same "ambient light" term. In contrast to the "light sensor" term, both claims 1 and 15 recite "a visible display."

Second, Polaris's argument ignores the rest of claim 1, which recites that the alleged invention is directed to a "brightness control circuit with selective ambient light correction" that "control[s] the brightness level of a visible display." Id. at cl. 1. Indeed, the alleged invention of claim 1 is not directed to correcting for "the light present in the environment around the light sensor," as Polaris claims; it is rather directed to correcting for the ambient light around the "visible display" so that its brightness level is properly maintained. The sensor is nothing more than a proxy for the display.

The specification also supports finding that the relevant "ambient light level" is not the level "around the light sensor" as Polaris suggests; it is the ambient light level around the visible display. Id. at 1:27-30. This is because such ambient light "reflects off the surface of the LCD . . . which reduces the display contrast to give the LCD a washed-out appearance," necessitating the "selective ambient light correction" for which the claims are expressly directed. *Id.* at 1:27-30; cls. 1, 15.

Finally, Polaris states that VIZIO's construction is objectionable because it could "include light on the backside of the television far from the light sensor." Brief at 8. But that misses the point: the claim does not restrict the location of the *light sensor*, which could be located anywhere, including away from the visible display "on the backside of the television." The *visible display*, on the other hand, is always the relevant reference point for determining the ambient light level for the purposes of the '117 patent claims, because "selective ambient light correction" is done to "control a brightness level of a visible display," not a light sensor. *Id.* at cl. 1. Indeed, it would make little sense to adjust the brightness level of a display based on the ambient light near the light sensor if such ambient light being measured did not affect the visible display. Ex. 5 (Katona Decl.) at ¶¶ 30-31. That is why VIZIO's construction specifies that the relevant ambient light is the light around the *visible display*.

VIZIO's construction is consistent with the understanding of a person of ordinary skill in the art (id. at ¶30),² as well as the claims and specification. The Court should adopt it here.

B. Claim 1: Polaris Provides No Evidence That "Configured To" Should Be Construed to Include An Implementation In Software For All Components

VIZIO's Construction	Polaris's Construction
Plain and ordinary meaning	"actually programmed or implemented with hardware or software to"

"Configured to" is a commonly used term of art in patent drafting. See, e.g., Radware Ltd. v. A10 Networks, Inc., 2014 WL 1572644, at *12-*13 (N.D. Cal. Apr.

Polaris's expert, Dr. Balakrishnan, did not provide any opinion on the meaning of the term "ambient light" as used in the '117 patent. As noted above, it appears he has no relevant experience in this area.

18, 2014). As set out in VIZIO's Opening Brief (at pages 5-9), the plain and ordinary meaning of "configured to" is context-dependent as used in patent drafting and the claims at issue here. For instance, a "hammer configured to hammer a nail" would require a context-specific construction for "configured to," just like it does here. Polaris, however, is asking the court to apply an interpretation of "configured to" that would impact the scope of *eight* different claim limitations (all components modified by "configured to") by specifying each of those eight claim limitations can be implemented in either hardware *or* software, absent reference to the specific context of *any* of those claim terms. That is incorrect and invites error: a person of ordinary skill in the art would look to the claims and specification—which in fact indicate to a person of ordinary skill in the art that only *one* of these eight limitations can be implemented in software—to see what configurations the patent describes to understand what "configured to" means individually for each limitation.

Specifically, Polaris points to three portions of the specification (col. 2:7-10, 5:35-38, and 14:9-12 (cl. 16)) to argue that "the invention of the '117 patent can be

Specifically, Polaris points to three portions of the specification (col. 2:7-10, 5:35-38, and 14:9-12 (cl. 16)) to argue that "the invention of the '117 patent can be implemented in software or hardware." Br. at 10. But each of these portions of the specification describes only the *multiplier*:

- At column 2, lines 7-10, the patent states that "[i]n one embodiment, software algorithm can be used [sic] to multiply the light sensor output with the user selectable brightness control";
- At column 5, lines 35-38, the patent states that "[t]he *multiplier* circuit 106 can be implemented using software algorithm or analog/mixed-signal circuitry"; and
- At claim 16 (col. 14:9-12), the patent states that the *multiplication* step is "performed by a software algorithm, an analog circuit, or a mixed-signal circuit."

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27 28 Polaris is trying to stretch this limited disclosure of embodiments that includes a software-implemented multiplier to encompass software implementations for every other claim element via its general, context-free construction.

This however is contrary to the specification. The specification indicates that the components other than the multiplier are implemented in hardware, whether the multiplier is implemented in software or in hardware. The first portion of the specification identified by Polaris describes *two* embodiments of the multiplier one in software, and one in hardware. Polaris discusses the software embodiment. But the passage goes on to explain that when the multiplier is implemented via hardware (circuitry), there is "advantageously" no need for a computer processor for executing software to convert the *hardware* output of the other components:

In another embodiment, analog or mixed-signal circuits can be used to perform the multiplication. Digitizing the light sensor output or digital processing to combine the user brightness contour selection with the level of ambient lighting is advantageously not needed. The light sensor control system can be autonomous to a processor for a display device (e.g., a main processor in a computer system of a LCD device).

Ex. 1 at 2:9-16. Thus, this passage teaches when the multiplier is implemented in hardware, there is no need for "digitizing" or "digital processing" (i.e., computer processing) to execute software because the other elements of the system are always implemented in hardware, even when the multiplier is implemented in software.

When the multiplier is implemented in software, on the other hand, the "digital processing" of the other components is required because they are always in hardware and thus have analog outputs that require conversion to digital. If it were otherwise, it would not be "advantageous" to implement the multiplier in hardware: if the other components were implemented in software, "digitizing the light sensor output or digital processing" of the user input signal would not be required to make them compatible. But the specification teaches no such embodiments; rather, it teaches that if the multiplier is implemented in hardware, no processor for software

is needed. This directly contradicts Polaris's contention that every component in the '117 patent described as "configured to" can be implemented in software. The specification teaches otherwise.

Polaris further argues that the Court should adopt its construction of "configured to" because the district court in Polaris's case against Samsung "construed 'configured to' in the claims of the '117 patent at summary judgement when a dispute between the parties arose as to its meaning." Br. at 9-10. Tellingly, however, Polaris leaves out that the "dispute between the parties" that the *Samsung* court resolved was the meaning of "configured to" *as it applied to the multiplier*, not the meaning of the term more broadly.

Specifically, Samsung moved for summary judgment in that case on the sole ground that it did not infringe because its products did not practice the *multiplier* limitation. *See*, *e.g.*, Ex. 7 at i. ("It Is Undisputed That The PAC Phones Do Not Use a "Multiplier" to "Generate A Combined Signal" Unless An End-User Alters The Phones' Default State And Customizes The PAC Functionality"); *id.* at 3 ("However, in that default configuration, PAC adjusts the brightness of the screen without using a multiplier to generate a combined signal."). While Polaris does not attach that Samsung's motion, a redacted version retrieved from PACER is attached hereto as Exhibit 7.

The *Samsung* court made its ruling on the meaning of "configured to" in response to the *specific dispute* as to the multiplier as raised by Samsung's motion, as the Order confirms. Polaris Ex. C at 3 ("The Court... determined that [Samsung's] motion and Polaris's related motion (Dkt. 196) raised an actual dispute as scope [*sic*] of the term 'configured to.""). Thus the *Samsung* court made its *sua sponte* ruling—without, apparently, the benefit of any briefing or argument—during the summary judgment hearing, finding that "configured to" included software

implementations *as to the multiplier*.³ Polaris's attempt to extend that ruling to other claim limitations is an overreach.

Finally, the cases cited by Polaris support VIZIO's position here. Polaris cites SIPCO, LLC, v. ABB, Inc., 2012 WL 3112302, at *5 (E.D. Tex. July 30, 2012), where the court adopted a similar construction that included software implementations for "configured to." But the claim in SIPCO was for "a computer configured to execute at least one computer program." "[C]onfigured to," in the context of that claim, expressly had to include software embodiments ("at least one computer program"). Id.. The claim here presents the opposite situation: it is for a "brightness control circuit," with no discussion of a "computer configured to execute at least one computer program" and—other than the multiplier—no indication in the specification that any other element of the claim can be implemented in software.

Similarly, Polaris cites *Radware Ltd. v. A10 Networks, Inc.*, 2014 WL 1572644, at *12-*13 (N.D. Cal. Apr. 18, 2014). Polaris notes that, like the *SIPCO* case, the court was construing "configured to" "in the context of software claims." Br. at 10; *id.*, at *1, *12 (claims for "managing a computer network," where the "network controller is further configured to translate a source IP address of the server"). Yet, consistent with VIZIO's position here, the *Radware* Court specifically noted that "configured to" is generally not dependent on technology and is a patent term of art, and thus found—"in the context of [the] software claims" presented there—that "configured to" meant "programmed to [perform certain functions]." *Id.*, at *12. Here, claim 1 is distinctly *not* directed to software—it is to

Polaris has refused to produce documents from the Samsung case to VIZIO, despite Samsung's willingness to participate in redacting those documents and producing them to VIZIO. VIZIO has moved to compel the production of that information. *See* Dkt. 127.

a "brightness control circuit"—and the only disclosures in the specification relevant to software relate only to the multiplier, and specifically teach that the other components are not implemented in software.

Polaris has cited no evidence in support of a definition of "configured to" that would include software implementations for components other than the multiplier. In fact, as set forth above, adopting Polaris's construction would directly conflict with the teachings of the patent that the other elements are *not* implemented in software and conflict with the use of "configured to" as a patent term of art. The Court should reject Polaris's attempt to broaden the scope of the asserted claims through a back-door construction of "configured to."

C. Polaris Ignores All Evidence Contrary to Its "Dark Level Bias" Construction

VIZIO's Construction	Polaris's Construction
Indefinite	Plain and ordinary meaning

Polaris's brief fails to address the actual problem that it faces: the specification describes "dark level bias" as component in some instances and a value in other instances.⁴ Br. at 12.⁵ A claim element directed to a component differs from one directed to a value in terms of its scope; yet nothing in the intrinsic evidence provides guidance on which is required for the claims.

⁴ For the reasons set forth in Section III.B, Polaris's contention that the patent discloses any implementations of the "dark level bias" term in software is incorrect. The evidence it cites for that proposition in its brief all relates to the multiplier. *See* Br. at 12; Section III.B above.

In this section, VIZIO responds to Polaris's arguments regarding the indefiniteness of the "dark level bias" term, which Polaris directed to the use generally in the independent claims. VIZIO articulated in its Opening Brief separate grounds on which the dependent claims are indefinite apart from the independent claims and continues to assert those grounds here.

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Polaris fails to discuss or engage *anywhere* with the substantial evidence in the claims, specification, and prosecution history characterizing the "dark level bias" as a *component* of the claimed circuit, not a "value." The entirety of evidence of *both* characterizations of the term is laid out in detail in VIZIO's Opening Brief (*see* VIZIO Br. at 11-14) and was cited by VIZIO in the Joint Claim Construction Statement. Polaris simply ignores this evidence in its discussion of the '117 patent, despite previously having litigated the patent to the edge of trial. There is no question Polaris is aware of the contrary evidence. It just chose to ignore it in arguing its position here.

First, Polaris ignores that Claim 1 is an apparatus claim directed to a "brightness control circuit" comprising four components—a first input, a light sensor, a multiplier, and a dark level bias. Ex. 1, cl. 1; Ex. 5 (Katona Decl.) at ¶ 43. As one of the elements comprising the claimed apparatus (i.e., the "brightness control circuit"), the "dark level bias" must recite a structure of the apparatus. Polaris's construction (a "value"), however, recites no structure at all, and ignores this fundamental fact about the claim language.

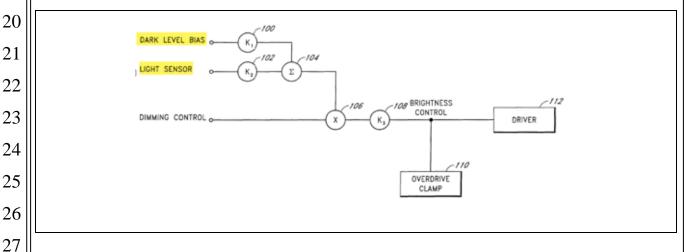
Second, portions of the specification and prosecution history both characterize the "dark level bias" as a circuit component, not a value. For instance:

- The specification describes the "dark level bias *circuit* [as] maintain[ing] the brightness control signal above a predetermined level...." Ex. 1 at 2:54-61 (emphasis added).
- The applicant referred to a dark level bias "circuit" during prosecution when referring to the claim limitation in question and distinguishing the prior art: "Thus, in an embodiment, the dark level bias *circuit* ensures a predefined (or minimum) brightness in total ambient darkness, which is not a boost factor" as taught in the prior art. Ex. 2 at POLARIS_0000435 (emphasis added).

Polaris's brief is utterly silent as to this evidence, and nowhere provides any explanation with how it can be reconciled with the evidence characterizing the "dark level bias" as a value. This glaring omission is telling: knowing that the intrinsic evidence characterizes the "dark level bias" term in conflicting ways, Polaris simply chose not to address it.

The '117 patent provides no way to harmonize the evidence that Polaris relies on with the evidence it strenuously ignores: it is fundamentally ambiguous. Where a patent describes a claim element in ways that are "materially inconsistent . . . a person of ordinary skill in the art would not be reasonably certain as to which of the patentee's two inconsistent definitions..." is used in the claims. *Infinite Computer Prod., Inc. v. Oki Data Americas, Inc.*, 2019 WL 2422597, at *5 (D. Del. June 10, 2019); *see also Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1341 (Fed. Cir. 2015) (holding claim term indefinite where patentee used inconsistent characterizations in prosecution).

For instance, Polaris relies heavily on Figures 1 and 2 in the patent to argue that these material inconsistencies do not render the "dark level bias" term indefinite because the only proper interpretation is that the "dark level bias" is a value. But these Figures illustrate the material inconsistencies of the patent. As an example, Figure 1 is reproduced below:



Polaris states that because Figure 1 "show[s] that the 'dark level bias' can be scaled by scalar circuit K_1 . . . it is a value that can be scaled." Br. at 14. But Polaris ignores that that Figure 1 also shows, to borrow its interpretation, that the "light sensor" can be scaled by a second scalar circuit— (K_2) . Yet the light sensor is unambiguously a hardware component of the apparatus.

Of course, Polaris recognizes that the proper interpretation is that Figure 1 shows the light sensor *component* providing an *output* that is scaled by K_2 . As Polaris says, "In Figure 1, the dark level bias is added to the scaled sensing signal *from the ambient light sensor*." Br. at 3. But, while Polaris recognizes in Figure 1 that the signal scaled by K_2 is an output from a component – the light sensor – it *insists* that the signal scaled by K_1 is the dark level bias itself, and not an output from a dark level bias component, as it is with the light sensor.

Figure 1 demonstrates the irresolvable ambiguity on this point. It puts the "light sensor" and "dark level bias" elements on the same level (as does claim 1) and refers to them in the same way (as does claim 1), indicating—if read consistent with how "light sensor" is used in Figure 1—that there is a component called the "dark level bias," which generates an (unnamed) signal that is scaled by the scalar circuit.⁶

VIZIO's straightforward contention is thus that the evidence in the claims and specification should be considered as a whole—not ignored in part, as Polaris does. When it is considered, it is evident that the patent characterizes "dark level bias" in two materially inconsistent ways—as both a component and a value—rendering the claims indefinite.

⁶ The description of Figure 1 in the patent does refer to "a sum of a dark level bias... and a light sensor output," thus also characterizing the "dark level bias" not as a component, but as a value. Ex. 1 at 4:45-61.

Polaris's reliance on a declaration from the *Samsung* case from Dr. Phil Hobbs—who is not VIZIO's expert witness on the '117 patent in this case despite Polaris's suggestion⁷—has no effect on this analysis. In *Samsung*, the parties did not dispute definiteness, and the Court was not asked to address it. Polaris Ex. D at 2. Instead, in *Samsung*, the parties *agreed* that "dark level bias" should be considered a value (a strategic litigation decision made by Samsung) but contested whether the value had to be "predetermined." Specifically, Samsung argued that the "dark level bias" had to be "predetermined"—*i.e.*, fixed at one value ahead of time—a position which it presumably took in support of a non-infringement argument relating to its products (despite Samsung's approval and willingness to participate in redaction, Polaris has refused to produce relevant *Samsung* materials to VIZIO that would clarify the parties' positions there (*see* Dkt. 127)). Dr. Hobbs's testimony was provided in support of *that* position, not in response to a challenge to definiteness.

Despite the fact Samsung chose to present no indefiniteness position and thus the dispute was not presented in that case, Polaris states throughout its brief that this is "strong evidence that 'dark level bias' is definite." Br. at 17. Polaris, however, cites no law in support of this proposition; that is because there is none—it is extrinsic evidence. A party often does not present particular litigation defenses for strategic reasons or adopts a portion of another party's construction where it supports a non-infringement position—as it appears Samsung tried to do in its litigation with Polaris. This is not reliable evidence of the meaning of the term.

⁷ VIZIO hired Dr. Hobbs to do teardowns of its televisions as to the '087 and '331 patents and provide a declaration summarizing the teardowns, not to opine on the '117 patent. Dr. Thomas Katona is the only expert VIZIO has ever disclosed for that purpose.

1. Alternatively, to the Extent the "Dark Level Bias" Term in Claim 1 is a Value, It is Indefinite Because There Is No Recited Structure for Performing the Claimed Function

While the Court should not adopt Polaris's construction, Polaris does not address the fact that, assuming Polaris's construction is correct—which, for the reasons set forth above, it is not—Polaris's construction renders the claim indefinite. Specifically, claim 1 is an apparatus claim directed to a "brightness control circuit" comprising four components—a first input, a light sensor, a multiplier, and a dark level bias. Polaris would have the Court re-write claim 1 as follows:

- **1. A brightness control circuit** with selective ambient light correction **comprising**:
 - **a first input** configured to receive a user signal indicative of a user selectable brightness setting;
 - **a light sensor** configured to sense ambient light and to output a sensing signal indicative of the ambient light level;
 - **a multiplier** configured to selectively generate a combined signal based on both the user signal and the sensing signal; and
 - a dark level bias a value configured to adjust the combined signal to generate a brightness control signal that is used to control a brightness level of a visible display such that the brightness control signal is maintained above a predetermined level when the ambient light level decreases to approximately zero.

Polaris proposes to replace the fourth element of the claimed brightness control circuit—which, as one of the elements comprising the claimed apparatus (*i.e.*, the "brightness control circuit"), must recite a structure of the apparatus—with a term ("value") that recites no structure at all.

Thus, as set out at length in VIZIO's Opening Brief, because "[t]here is no recited structure in [claim 1] that arguably provides that [value] . . . the functional language [of claim 1] is not tied to the capability of any associated structures" and is indefinite under the Federal Circuit's case law requiring that an apparatus claim consist of structural elements. *Power Integrations, Inc. v. ON Semiconductor Corp.*, 2018 WL 5603631, at *17 (N.D. Cal. Oct. 26, 2018). By reducing the "dark level

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bias" to a value, Polaris is "[c]laiming a result without reciting what materials produce that result" which is "the epitome of an indefinite claim." *Forest Labs.*, *Inc. v. Teva Pharm. USA, Inc.*, 716 Fed. Appx. 987, 996 (Fed. Cir. 2017) (Lourie J., concurring). Thus, Polaris's construction, if adopted, renders the claim indefinite.

2. Alternatively, to the Extent the "Dark Level Bias" Term in Claim 1 is a Circuit Component, It Is Indefinite Because Claim 1 Would Conflict with Its Dependents

Furthermore, even if person of ordinary skill in the art could conclusively resolve the conflicting evidence and determine that the "dark level bias" term is a component of the "brightness control circuit" of claim 1 (not a signal or value), then it is indefinite under the law because claim 1 conflicts with the characterization of "dark level bias" in dependent claims 2, 4, and 5. Dependent claims 2, 4, and 5 require "providing" the "dark level bias" to the multiplier or "adding" the "dark level bias," a characterization that is not consistent with characterizing the "dark level bias" as a component. Ex. 5 (Katona Decl.) at ¶ 44. A component cannot be sensibly said to be provided to another component or added to a signal. *Id.* Instead, a person of ordinary skill in the art would understand that the language of the dependent claims is consistent with characterizing the "dark level bias" as a value, which would commonly be "provided" to another component or "added" to another signal. *Id.* An independent claim that conflicts with its dependents in this manner is invalid as indefinite.⁸ See, e.g., Loyalty Conversion Systems Corp. v. American Airlines, Inc., 2014 WL 4352489, at *5 (E.D. Tex. Sept. 2, 2014); MONKEYmedia, Inc. v. Apple, Inc., 2015 WL 4758489, at *11-13 (W.D. Tex. Aug. 11, 2015)

Claim 15 presents a similar issue if "dark level bias" is read to be a component, as dependent claims 17 and 18 recite "wherein the dark level bias is added to the sense signal before selective multiplication" and "wherein the dark level bias is added to the combined signal after selective multiplication." Ex. 1 at cls. 17 & 18. See Section II.C.1.

(conflict between independent and dependent claims, among other issues, rendered claims "nonsensical" and "incoherent" and resulted in a claim that was "fundamentally inconsistent" such that it was indefinite).

Thus, if "dark level bias" is read to be a component of the "brightness control circuit" of claim 1, a person of ordinary skill in the art could not ignore the its characterization as a value or signal in the dependent claims. A person of ordinary skill in the art would be left to "guess at its meaning"—rendering its scope less than reasonably certain. *Loyalty Conversion*, 2014 WL 4352489, at *5.

D. Claims 1, 15: Polaris Identifies No Intrinsic Evidence Providing Guidance On the Meaning of "Approximately Zero," Because There Is None

VIZIO's Construction	Polaris's Construction	
Indefinite	Plain and ordinary meaning	

In order to determine whether an accused device meets this claim limitation—that is, whether a display maintains a predetermined brightness level "when the ambient light level decreases to approximately zero"—a person of ordinary skill in the art would have to first know when "the ambient light level decreases to approximately zero." That is fundamental to this claim limitation (which was added to distinguish over prior art): the brightness control signal must be maintained above a "predetermined level" *under a specific condition*—"when the ambient light level decreases to approximately zero."

For instance, as the ambient light around an accused television's display

⁹ While Polaris goes on at length regarding the definiteness of "predetermined level," VIZIO explained during the meet and confer process that it intended to focus its argument on the "approximately zero" portion of this claim term and the fact that, absent knowing what value was "approximately zero," it was impossible to know if the a display's brightness is maintained above a "predetermined level" at when the ambient light decreases to that level. Reply Summers Decl. at ¶ 4.

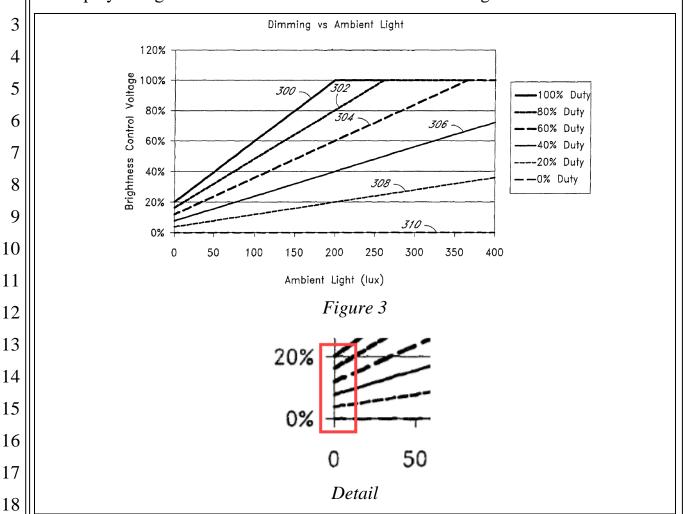
decreases from a starting point of 400 lux towards what the patent refers to as "total ambient darkness," and an accused television begins steadily maintaining its brightness "above a predetermined level" when the ambient light around the display reaches only 20 lux, is 20 lux "approximately zero" in a way that the television would infringe the claim? What if the accused television begins steadily maintaining its brightness at an ambient light level of 10 lux? What about 5 lux? What about 1 lux? Without any guidance at all, it is impossible to know the scope of the asserted claims with reasonable certainty. *See* VIZIO Br. at 23-25; Ex. 5 (Katona Decl.) at ¶¶ 57-61.

Polaris cites to no intrinsic evidence that provides guidance on the meaning of the "approximately zero" term, because there is none. Specifically, the specification gives no guidance at all on how to determine what ambient light level is "approximately zero"—indeed, the specification provides an example of "total ambient darkness," *i.e.*, at 0 lux.

This is critical: when a patent gives guidance only as to an absolute—such as "total ambient darkness"—but no guidance as to a term of degree (such as "approximately"), that claim term is indefinite. *See Berkheimer v. HP Inc.*, 881 F.3d 1360, 1364 (Fed. Cir. 2018) (where claim recited "minimal" redundancy but gave only examples of no redundancy, holding indefinite). For instance, where a claim recites "substantially equal" depths, but the specification gives guidance only as to "equal" depths, courts have found the claim indefinite. *Geodynamics, Incorporated v. Dynaenergetics US, Inc.*, 2016 WL 6217181, at *15-16 (E.D. Tex. Oct. 25, 2016); *see also* VIZIO Br. at 25 (discussing same).

This is the situation here: the patent gives only examples of maintaining the brightness of a display above a predetermined level when the absolute ("total ambient darkness"—*i.e.*, 0 lux) is reached, *not* when ambient light levels reach "approximately zero." For instance, Figure 3 illustrates the change in a display's brightness (the "brightness control signal voltage" along the y-axis) as a function of

the ambient light levels (along the x-axis) at various settings. Each line shows how the display's brightness reacts to decreases in the ambient light level:



Notably, the display's brightness (for each setting) decreases linearly as it approaches 0 lux. The brightness does not flatten out (*i.e.*, maintain a "predetermined level") as the ambient light level decreases to 99 lux or 9 lux, or even 0.9 lux. Instead, the display's brightness as depicted in each example in Figure 3 is maintained "above a predetermined level" *only* when *exactly* 0 lux is reached—not when "approximately zero" is reached (whatever that may be). In short, the specification provides no guidance on how to determine when the ambient light level is "approximately zero" from Figure 3 or anywhere else; it only provides guidance as to what constitutes the absolute—"total ambient darkness" (0 lux). Ex. 5(Katona Decl.) at ¶ 59.

The extrinsic evidence also provides no guidance. There is no standard in the art for what "approximately zero" ambient light is in the context of "selective ambient light correction" in a display. As Dr. Katona, VIZIO's expert explained:

I note that I am aware of no external standards or criteria in place now or at the time of the alleged invention for determining what constitutes 'approximately zero' in the context of the '117 claims. There were (and are) no commonly accepted standards for 'approximately zero' in the context of the alleged invention that a person of ordinary skill would have been aware of at the time of the invention, and the intrinsic evidence does not reference any standards.

Id. at ¶¶ 58-59.

Despite the absence of any intrinsic or extrinsic evidence, however, throughout its brief, Polaris proposes a number of different definitions for "approximately zero" in the claims, including:

- "approximately zero (i.e. *total ambient darkness*)" (*id.* at 23) or "when the sensing signal from the light sensor is zero (e.g. in *complete darkness* when the ambient light is approximately zero") (Br. at 3, 5);
- "when the ambient light level is *very low* (i.e. 'approximately zero')" (*id.* at 12);
- "an absence of any *appreciable* ambient light (i.e. total ambient darkness)" (Dkt. 106-1 (Balakrishnan Decl.) at ¶ 43.

That Polaris repeats these unsupported definitions throughout highlights the lack of any reasonable certainty in the patent. These definitions are neither consistent ("total ambient darkness" vs. an ambient light level that is "very low" vs. "an absence of any *appreciable* ambient light") nor are they supported by any intrinsic evidence in the patent. They serve only to demonstrate the lack of an objective boundary to the claim's scope.

Polaris's citation to conclusory expert testimony and cases construing "approximately" in *other* contexts (where the intrinsic evidence does give the necessary guidance) are inapposite. *First*, the Federal Circuit has instructed that

conclusory expert testimony should be rejected during claim construction. *See Polygroup Limited MCO v. Willis Electric Company, Ltd*, 758 Fed. Appx. 943, 949 (Fed. Cir. 2019) (nonprecedential) (finding error in reliance on conclusory testimony from the patentee's technical expert because "conclusory, unsupported assertions by experts as to the definition of a claim term' are not useful during claim construction") (quoting *Phillips*, 415 F.3d at 1318). Here, Dr. Balakrishnan cites to nothing in the intrinsic evidence or elsewhere supporting his bald assertion that "[o]ne of skill in the art would understand the phrase 'when the ambient light level decreases to approximately zero' in the claims of the '117 patent to cover the condition where there is an absence of any appreciable ambient light (*i.e.*, total ambient darkness)." He gives no guidance as to what "appreciable ambient light" should mean in this context, nor does he cite any support for his conclusion.

Moreover, Dr. Balakrishnan's conclusory statement that "approximately zero' accounts for the practical measurement or rounding errors present in ambient light sensors" makes no sense and appears to merely parrot the language of a case that Polaris cites in an attempt to bring his opinion in line with that case. Dr. Balakrishnan does not explain how knowledge of "the practical measurement or rounding errors present in ambient light sensors" would provide a person of ordinary skill in the art the ability to distinguish between "approximately zero" ambient light levels and "very low" ambient light levels—or any other light level at all. In other words, to the extent Dr. Balakrishnan is suggesting that "approximately zero" means "total ambient darkness" give-or-take "practical measurement or rounding errors," he gives no guidance for what would constitute an "error" such that a person of ordinary skill in the art would recognize, with reasonable certainty, an ambient light

This is not surprising, as Dr. Balankrishnan has no disclosed experience whatsoever working with ambient light sensors or lighting in general. He is a computer scientist.

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level that is "approximately zero." That is because within such field, there is no such recognized standard, and ambient light sensors have a wide array of potential sensitivities depending on their implementation. Ex. 5 (Katona Decl.) at ¶¶ 58-59.

The cases that Polaris relies on also further confirm that "approximately zero" renders the claims indefinite. For instance, Polaris cites Max Blu Technologies, LLC v. Cinedigm Corp., 2016 WL 3688801, at *30 (E.D. Tex. July 12, 2016). Much like Polaris here, the plaintiff in Max Blu argued that the Federal Circuit has specifically held that "the word 'approximately' is not indefinite." *Id.* The court rejected that contention, finding based on its review of Federal Circuit's decisions that "[t]he term 'approximately' is not inherently definite or indefinite." *Id.* Rather, the court explained that the Federal Circuit has instructed that "[w]hen such a word of approximation is used, the parameter's 'range must be interpreted in its technological and stylistic context." Id. (citing Ortho-McNeil Pharm., Inc. v. Caraco Pharm. Labs., Ltd., 476 F.3d 1321, 1326 (Fed. Cir. 2007)). range 'depends upon the technological facts of the particular case." *Id.* (same). "However, when 'nothing in the specification, prosecution history, or prior art provides any indication as to what range . . . is covered,' the claim is indefinite." Id. (citing Amgen, Inc. v. Chugai Pharm. Co., 927 F.2d 1200, 1218 (Fed. Cir. 1991)).

That is the case here. There is nothing in the intrinsic evidence—and Polaris provides no other guidance—for what range above absolute zero ambient light (*i.e.* "total ambient darkness") is covered. The context of the claims, specification, and prosecution history provides no such guidance; neither does Polaris's expert. That is because, as confirmed by VIZIO's expert, there is no standard in the art for what would constitute a range of "approximately zero" above absolutely zero ambient light. Yet the '117 applicant expressly chose to claim maintaining the display's brightness not in "total ambient darkness" but in "approximately zero" ambient light, rendering the claim indefinite. A review of the remaining cases relied on by

Polaris shows, similarly, that courts review the intrinsic evidence to determine if it would demonstrate to a person of ordinary skill in the art that there are "objective boundaries" to satisfy the definiteness standard for a term of degree. See Interval Licensing LLC v. AOL, Inc., 766 F.3d 1364, 1370-71 (Fed. Cir. 2014); GE Lighting Sols., LLC v. Lights of Am., Inc., 663 Fed. Appx. 938, 940 (Fed. Cir. 2016) (finding "elongated" indefinite because, where term of degree is used, the patent must provide some standard for measuring that degree such that the claim language provides enough certainty to one of skill in the art when read in the context of the invention."). Here, Polaris does not cite to a single scrap of intrinsic evidence in support of its position, and its expert testimony is conclusory and unsupported. The Court should find the "approximately zero" renders the claims indefinite. IV. **CONCLUSION** For the foregoing reasons, VIZIO requests that the Court adopt VIZIO's proposals for the nine terms at issue from the '117 patent. DATED: October 3, 2019 Respectfully submitted,

By/s/ Zachariah Summers

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